

Music Preference and Its Relationship with Personality Traits

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This study assumes that there are individual differences in music preference and examines the relationship between personality traits and music preference. The participants were 347 college students (185 females) whose ages ranged from 17 to 37 ($M=21.53$, $SD=2.26$), the Big Five Locator test and the BAS/BIS Scale were used to measure personality traits. The results of the proposed 35-item Music Preference Questionnaire indicate a satisfactory level of reliability and validity. Women were more likely to be involved in musical activities and more likely to prefer classical music than men. The results of the correlation analysis reveal that whereas extraversion, openness, and agreeableness were positively related to music preference, emotional stability was negatively related to the pursuit of psychological effects of music, a subscale of the MPQ. All the sub-variables of the BAS and BIS scales were positively related to music preference. The BAS and the BIS accounted for approximately 15% of the variance in music preference, and Big Five personality traits, approximately 7%. This study verifies the gender differences in music preference, illustrates some personality traits related to music preference, and suggests that dispositional and motivational personality factors are more closely related to music preference than to personality characters.

Key words : Music Preference, Personality, Big Five Personality Factors, BAS/BIS

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People are involuntarily exposed to music in their everyday life, but they also voluntarily enjoy music, including listening to music, singing, playing musical instruments, and participating in other musical activities. Young people are likely to be influenced by music and its phenomenon, and thus there may be some individual differences in their use and enjoyment of music. Previous studies have assumed that there are substantial differences in music preference or the use of music in the everyday life of college students.

In this regard, this study proposes new assessment tools for evaluating music preferences. Previous studies of individual differences in the use of music have focused only on listening music. Some studies (Kopacz, 2005; Rentfrow & Gosling, 2003; Schwartz & Fouts, 2003) have focused on differences in the preference of different genres of music. However, it is difficult to generalize their finding to other cultural contexts because they are cross-culturally limited in terms of their focus as well as their questionnaires. Recently, Chamorro-Premuzic and Furnham (2007) concentrated on psychological functions and suggested three major reasons behind people's use of music in their daily life. They proposed that people use music for emotional regulation purposes such as mood manipulation, cognitive needs for the rational musical appreciation or intellectual processing of music, and background media for social events, work, and interpersonal interaction.

Aside from individual differences in people's preference for emotional effects of music, there may be individual differences in people's preference for certain musical activities, including learning and playing a musical instrument, singing, and going to concerts. Therefore, this study explores the involvement of some musical activities and the preference for emotional effects of music to provide a better understanding of individual differences in people's use of music in their daily life. Gender is a central concept in music, and gender stereotypes in music are developed from early childhood (Delzell & Leppa, 1992). Such gender stereotypes can not only influence individuals' musical activities, but also promote or limit the use of music in their daily life (Pickering & Repacholi, 2002). Thus, this study assumes gender differences in music preference.

Recently, a large number of studies have examined the psychological aspects of music. Although some studies have identified a relationship between music and social behavior (Hargreaves & North, 1997; North, Hargreaves, & McKendrick, 2000; Grewe, Nagel, Kopiez, & Altenmüller, 2007) or the social identity of individuals (North, Hargreaves, & O'Neill, 2000; Tekman & Hortaçsu, 2002), music educators and psychologists have typically expressed no interest in the relationship between personal traits and the motivation to use or enjoy music.

Rentfrow and Gosling (2003) examined the importance of music in everyday life and

explored the relationship between personality and music preference. They were inspired by a classical study (Cattell & Saunders, 1954) that identified music preference factors and its subconscious effects on personality traits. Recently Chamorro-Premuzic and his colleagues (Chamorro-Premuzic & Furnham, 2007; Chamorro-Premuzic, Gomà-i-Freixanet, Furnham, & Muro, 2009; Chamorro-Premuzic, Swami, Furnham, & Maakip, 2009) investigated people's use of music by comparing it with their intellectual ability and personality. Schwartz and Fouts (2003) explored the relationship between the preference for three types of music listening and personality and developmental issues, and concluded that only the adolescents who have strong or rigid music preferences may reveal important personality adjustment and developmental issues. Chamorro-Premuzic and Furnham (2007) explored individual differences in the use of music and determined why and how people use music in their daily life. They found that more open and intellectually engaged individuals and those with higher IQ scores, are more likely to use music in a rational way (i.e. maintaining their concentration or using the intellectual content of music) than neurotic, introverted, and non-conscientious individuals, who are more likely to use music for emotional regulation purposes (i.e. changing or enhancing their moods). They also suggested that people's personality and cognitive ability may partly determine the way they prefer and experience

music.

The emotional influence of music may be related to personality factors such as emotional stability, neuroticism, and extraversion. In particular, stress relief effects of music or happiness produced by music (Gabrielsson & Lindström, 2003) may be linked to emotional stability, and the simulative value of musical elements (Kopacz, 2005) may be related to extraversion. Although emotional stability, extraversion, and conscientiousness were found to be negatively correlated with music preference in Chamorro-Premuzic and Furnham (2007), replication studies (Chamorro-Premuzic, Gomà-i-Freixanet, Furnham, & Muro, 2009; Chamorro-Premuzic, Swami, Furnham, & Maakip, 2009) provided findings that are inconsistent with those of the original study. In particular, extraversion was found to be positively, not negatively, related to the use of music in these two studies.

Rentfrow and Gosling (2003) found that openness was closely and positively related to most of the genres of music preferred by the college students in their study. They suggested that a highly open individual (someone open to new and unfamiliar experiences) may prefer certain styles of music that could reinforce his or her sense of being artistic or sophisticated. But their suggestion has not been verified. Thus, it may be assumed that a person with a higher level of openness would be more likely to engage in unfamiliar musical activity such as

learning a musical instrument or going to certain a concert. In addition, being involved in certain musical activities or learning an instrument may reflect the conscientiousness of the individual in that it requires hard work. Thus this study explores these relationships.

Previous studies (Chamorro-Premuzic & Furnham, 2007; Chamorro-Premuzic, Gomà-i-Freixanet, Furnham, & Muro, 2009; Chamorro-Premuzic, Swami, Furnham, & Maakip, 2009; Kopacz, 2005) have suggested that emotional stability and extraversion are significantly related to music preference and the use of music. These two personality factors, which belong to Big Five personality factors, are more dispositional or temperamental than character, whereas other three personality factors are not. This suggests that these two personality factors are more hereditary and could be a cause rather than effects of music preference. Thus, there is a need to explore the relationship between the more dispositional personality/temperament and music preference.

Some theorists (Carver & White, 1994; Cloninger, 2000; Eysenck, 1967; Fowles, 1980) have suggested some systems reflecting dispositional personality traits and neurobiological processes in emotions, cognitions, and behaviors, including the behavioral activation system (BAS) and the behavioral inhibition system (BIS). The BAS is a motivational system that is sensitive to signals of fun, rewards, and non-punishment. It is important for engaging behavior toward a

reward, and it is associated with feelings of optimism, joy, and aggression (Gray & McNaughton, 2000). The BIS refers to the abrogation of behavior in reaction to unexpected stimuli and the deliberative process of inhibitory control (Aron, Robbins, & Poldrack, 2004). In other words, the BAS regulates appetitive motives, which refers to the movement toward something preferred or desired, whereas the BIS regulates aversive motives, which refers to the movement away from something painful or unpleasant. Because the effects of music preference may be related to sensation seeking and reward dependence (Grewe, Nagel, Kopiez, & Altenmüller, 2007), we assumed that the BAS and the BIS which consider dispositional personality factors, can account for a greater level of variance in music preference than the Big Five personality factors.

Another reason for choosing the BAS and the BIS as personality variables is that these personality systems are based on the level of motivation. This study assumes that why and how people use music and genres of music that they enjoy play important roles in their preferences. We also assume that people use music to regulate their moods and emotions. Music is known to promote excitement and relieve stress. That is, people may prefer music because it can produce emotional excitement or calmness. Gabrielsson and Lindström (2003) studied the strong emotional experiences in response to music, including physical responses,

perceptions, cognition, emotions, and transcendental and existential aspects. They found that happiness is the most commonly felt emotion while experiencing music. Kopacz (2005) suggested that musical elements have a stimulative value and the ability to regulate people's need for emotional stimulation.

This study investigates personal differences in music preference and examines the relationship between music preference and personality traits, including both personality characters and dispositional personality. First, we hypothesize that there are gender differences in music preference and in use of music in everyday life. We also hypothesize that dispositional personality traits and motivation-based personality factors are more closely related to music preference than the personality character. To test these hypotheses, this study uses a new questionnaire for music preference, including people's preference for certain musical activities, and compares the accountability of the two personality concepts - the Big Five personality and the BAS/BIS - to the music preference of college students.

Methods

Participants

The study participants included a total of 347 male and female college students who were

enrolled in two colleges in Seoul: 162 (48.1%) males and 185 (51.9%) females. Their age ranged from 17 to 37, and the average age was 21.53 ($SD=2.26$). Only 104 students, for efficiency purposes, participated in the second administration for the test-retest reliability of the questionnaire, which inquired their music preference.

Instruments

The Big Five Locator Test. This test is known as a useful instrument for measuring Big Five personality factors. This scale provides a quick, general look at an individual's personality, because its administration and scoring are very simple. It usually takes few minutes to complete the test. Howard and his colleagues (1994) developed this scale through a field test with several items and chose the items that were valid and reliable. This test addressed five general personality traits: emotional stability or neuroticism, extraversion, openness, agreeableness, and conscientiousness. Emotional stability determines whether a person adjusts to an unpleasant situation; becomes emotionally unstable; or maintains his or her ability to be rational, to resist urges, and to use positive coping strategies. Extraversion reflects the tendency to be sociable and assertive and a preference for stimulation and excitement. Openness reflects the acceptance of new ideas and experiences and a preference for variety.

Agreeableness is the tendency to be easily accommodating in social situations, which typically promotes cooperation and social harmony. Conscientiousness is the tendency to achieve goals through self discipline, carefulness, thoroughness, organization, and deliberation. The respondents marked a number on a five-point continuum, indicating the adjectives that best described their own tendencies. This scale originally includes 25 items (5 items for each personality factors), but in the present study, one emotional stability item was excluded because its factor loading was less than .30. The internal consistency (Cronbach's α) of personality factors ranged from .63 to .72 in this study.

BIS/BAS Scale. The participants' Behavioral Activation System (BAS) and Behavioral Inhibition System (BIS), which refer to dispositional or temperamental personality traits, respectively, were measured using Carver and White's (1994) BAS/BIS Scale. The three sub-scales, including reward responsiveness (5 items), seeking fun (4 items), and drive (4 items), reflected behavioral activation sensitivity or incentive responsiveness. One scale (7 items) reflected behavioral inhibition sensitivity or threat responsiveness. People with high BAS sensitivity tend to seek new incentives, to be persistent in pursuing incentives, and to respond to positive emotions when incentives are attained. The functions of its sub-variables are slightly different from each other. Reward responsiveness is the

positive reaction to the occurrence or anticipation of reward, whereas drive is the motivation to gain a reward. Fun-seeking behavior refers to willingness to approach a potentially rewarding situation. The BIS refers to the responsiveness to punishment or a breaking system, and represents the signals of punishment, non-reward, and innate fear stimuli. The BAS/BIS scale consisted of 20-items ranging from 1 (not at all) to 4 (always). The internal consistency (Cronbach's α) was .70~.75 for each of the subscales of the BAS, and it was .77 for BIS.

Music Preference Questionnaire. We developed a music preference questionnaire (MPQ) to measure the participants' personal music preference. The MPQ consisted of questions about types of music they liked, how much they enjoyed music, and why they liked music. The questionnaire items were generated through focus group interviews (FGIs: 10 undergraduate students and 2 graduate students) and consultations with music therapists, college professors, graduate students in music, and a psychologist who specialized in psychometrics. During the FGIs, the students were asked how much they liked music and the types of much they enjoyed. And indicated the reason why they liked music and the type of music and musical activities that they experienced. A 48-item draft questionnaire was tested on 86 college students. An item analysis was conducted to develop the final 35-item questionnaire of music (i.e., to

eliminate those items with a low variance and those extremely correlated with other item), including six music preference areas: 1) the pursuit of emotional excitement effects of music, 2) the pursuit of emotional calmness effects of music, 3) the preference for musical activities, 4) the preference for singing, 5) the preference for pop music, and 6) the preference for classical music. A factor analysis indicated that the pursuit of emotional excitement effects and that of emotional calmness effects were the same, and thus, five music preference areas (the pursuit of psychological effects of music, the preference for musical activities, the preference for singing, the preference for pop music, and the preference for classical music) were finally selected. Each item was measured on a four-point response scale ranging from 1 (strongly disagree) to 4 (strongly agree); their reliability and validity were determined to be generally satisfactory (Table 2).

Procedures and Data Analysis

Each participant was interviewed and given a packet containing the questionnaire, a consent form, and a demographic sheet. We employed an informed consent process. We disclosed information on the study to facilitate their understanding of this study and to encourage their participation. Each participant spent an average of 30 minutes for this research. Those who participated in the second administration of the MPQ for its test-retest reliability spent

additional 10 minutes.

All the participants were interviewed, and they answered the given questionnaire and completed a psychological test in which they wrote a certain number on the inside cover of their psychology textbooks. Eight weeks later, some students were asked to answer the MPQ again, and provide the number on their textbook cover to analyze the test-retest reliability of the MPQ.

SPSS 15.0 for Windows was used for all the statistical analyses, mainly the exploratory factor analysis, the t-test, the Pearson-Product Moment correlational analysis, and the multiple regression analyses.

Results

The Reliability and Validity of the MPQ

To identify the underlying structure of the MPQ, we conducted an exploratory factor analysis (Table 1). Principal axis factoring (PAF), which analyzes the shared variance among the items, was used with orthogonal varimax rotation and the number of components retained with Kaiser's criterion, which extracts components if the Eigen-value is 1 or less.

The Kaiser-Mayer-Olkin (KMO) measure of sampling adequacy was .934, and Bartlett's test of sphericity was $p < .05$, indicating the adequacy of the sample and the correlations and

Table 1. Results of the Factor Analysis with Music Preference Items

Items	Factor loading					R ²
	1	2	3	4	5	
Music makes me feel calm.	.636					.540
I listen to music when I am affronted.	.649					.530
Music makes me excited and delighted.	.589					.503
I use an MP3 or a cell phone to listen to my music when I am outside.	.520					.406
Music relieves my stress.	.792					.708
Without music, my life would be obscure.	.667					.544
I listen to music when I am depressed.	.787					.687
I have separate time to listen to music at home.	.652					.539
Music makes me feel delighted.	.848					.791
Quiet ballad music makes me sentimental.	.597					.396
Music makes me peaceful.	.791					.729
Music makes me excited.	.733					.696
Music rejuvenates my body and refreshes my mind.	.685					.657
Music stimulates my imaginative thoughts.	.544					.534
I listen to music while studying or working.	.498					.345
I listen to music that fits my mood.	.657					.469
I have worked with music before.		.803				.687
I am involved in a musical activity.		.771				.647
I enjoy playing a musical instrument.		.738				.689
I have the ability to play a musical instrument.		.795				.662
I have wanted to learn how to play a musical instrument.	.416	.479				.453
If I have a chance, I want to work in the field of music (more).		.645				.675
I don't like it when others ask me to sing.			-.728			.543
I enjoy going to karaoke.			.674			.643
I become relieved after I sing.			.619			.615
I enjoy singing.			.826			.821
I enjoy listening to folk songs.				.526	-.428	.599
I enjoy listening to pop songs.				.643		.577
I enjoy going to concerts where my favorite star performs in.				.599		.538
I enjoy listening to dance music.				.584		.503
I prefer music programs on TV or radio.				.574		.464
I enjoy listening to classical music.					.677	.653
Classical music is boring.					-.588	.365
I enjoy going to musical concerts.		.427			.653	.728
I prefer music with no lyrics in it.					.534	.462
Eigenvalues	12.357	3.286	1.851	1.591	1.312	
% of Variance	35.304	9.387	5.289	4.546	3.749	

Note. Factor 1: the pursuit of psychological effects of music; Factor 2: the preference for musical activities; Factor 3: the preference for singing; Factor 4: the preference for pop music; Factor 5: the preference for classical music

suggesting the suitability of applying a factor analysis. Finally, five factors were retained (Eigen values=12.36, 3.29, 1.85, 1.59, and 1.31, respectively), which accounted for 58% of the total variance (35.30%, 9.39%, 5.29%, 4.55%, and 3.75%, respectively).

In exploratory factor analysis, the criteria for the significance of factor loadings can generally be classified as the minimum consideration level (greater than .30), the more important level (greater than .40), and the practically significant level (greater than .50). Because this study's sample size was between 200 and 350 (Fabrigar, Wegener, MacCallum, & Strahan, 1999), we chose the items with factor loadings .40 or greater.

Among the 35 items, 16 loaded on Factor 1 (the pursuit of psychological effects of music); 6 on Factor 2 (the preference for musical activities); 4 on Factor 3 (the preference for singing); 5 on Factor 4 (the preference for pop music); and 4 on Factor 5 (the preference for

classical music). As shown in Table 1, although the underlying structure of the MPQ was relatively vivid, three items' factor loading values were significant with more than one factor.

The internal consistency and test-retest reliability of the MPQ were generally satisfactory. The internal consistency (Cronbach's alpha) of the MPQ was .94. For subscales, the internal consistency was .94 for the pursuit of psychological effects of music, .87 for the preference for musical activities, .80 for the preference for singing, .67 for the preference for pop music, and .79 for the preference for classical music (Table 2). The coefficient for the test-retest reliability of the MPQ was .75. The test-retest reliability of the subscales was .80 for the pursuit of psychological effects of music, .64 for the preference for musical activities, .64 for the preference for singing, .61 for the preference for pop music, and .72 for the preference for classical music.

Table 2. Reliability of the Music Preference Questionnaire

Coefficient of reliability	Pursuit of Psychological Effects of Music (Factor 1)	Preference for Musical Activities (Factor 2)	Preference for Singing (Factor 3)	Preference for Pop Music (Factor 4)	Preference for Classical Music (Factor 5)	(Total) Music Preference
(Number of items)	(16)	(6)	(4)	(5)	(4)	(35)
Internal consistency (N=344)	.94	.87	.80	.67	.79	.94
Test-retest reliability (N=104)	.72	.80	.64	.61	.72	.75

Gender Differences in Music Preference

We examined gender differences in music preference among college students in terms of its sub-variables. The results indicate no significant gender differences in the pursuit of psychological effects of music, the preference for singing, and the preference for pop music (Figure 1). However, there were gender differences in the preference for musical activities ($t=4.97, p<.001$) and classical music ($t=4.64, p<.001$).

The female participants were more likely to prefer classical music than their male counterparts. Opportunities for musical activities (particularly for the MPQ's classical music

subscale) are provided to children by their parents in early childhood.

Relationship between Personality Traits and Music Preference

This section examines the relationship between the participants' personality traits and their music preference with respect to the sub-variables. We first review the correlations between gender or age and music preference. The participants' gender accounted for approximately 6.7% of the variance in the preference for musical activities ($r=.26, p<.001$), and 5.9% of the variance in preference for

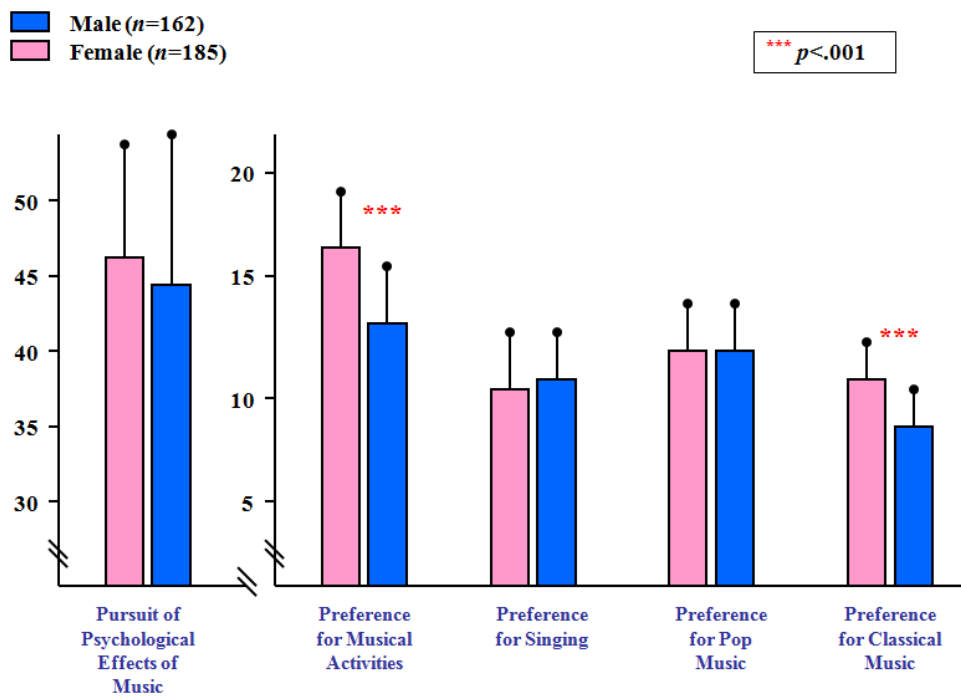


Figure 1. Gender Differences in Music Preference

classical music ($r=.24, p<.001$). Their age was negatively related to the preference for singing ($r=-.14, p<.05$) and the preference for pop music ($r=-.20, p<.001$). These results indicate that individuals are less willing to singing and tend to prefer pop music as they grew older. As shown in Table 3, some personality factors, including extraversion ($r=.11, p<.05$), openness ($r=.24, p<.001$), and agreeableness ($r=.11, p<.05$), were related to the total score

Table 3. Correlational Matrix of Gender, Age, Personality traits, and Music Preference (N=347)

Variables	Pursuit of Psychological Effects of Music	Preference for Musical Activities	Preference for Singing	Preference for Pop Music	Preference for Classical Music	(Total) Music Preference	M (SD)
Gender (Female)	.09	.26***	-.08	.01	.24***	.14**	
Age	-.02	.01	-.14*	-.20***	.08	-.05	21.53 (2.26)
Emotional Stability	-.11*	.07	.04	.02	.02	-.03	11.59 (2.76)
Extraversion	.08	.06	.23***	.11*	-.05	.11*	16.89 (3.55)
Openness	.22***	.14**	.20***	.11*	.23***	.24***	16.14 (3.25)
Agreeableness	.10	.06	.19***	-.01	.07	.11*	17.27 (3.11)
Conscientiousness	.08	.17**	-.07	-.03	.18***	.10	16.85 (3.54)
Reward Responsiveness	.36***	.19***	.20***	.24***	.10	.33***	14.96 (2.86)
Drive	.25***	.24***	.21***	.09	.19***	.28***	10.50 (2.36)
Fun-Seeking	.28***	.13*	.22***	.19***	.15**	.28***	10.48 (2.32)
Behavioral Inhibition	.32***	.28***	.17**	.13*	.23***	.33***	19.21 (3.24)
M(SD)	45.48(10.67)	15.14(4.92)	10.94(3.09)	12.13(3.05)	9.82(2.97)	93.51(19.18)	

* $p<.05$, ** $p<.01$, *** $p<.001$.

of the MPQ. In particular, openness was positively correlated with all the sub-variables of MPQ. Conscientiousness was positively related to the preference for musical activities ($r=.17$, $p<.01$) as well as for classical music ($r=.18$, $p<.001$). Emotional stability was negatively related to the pursuit of psychological effects of music. This suggests that people who are emotionally unstable are more likely to seek psychological effects of music. The preference for singing was closely related to some of the Big-Five personality factors.

We examined the relationship between the BAS/BIS (more dispositional or temperamental personality traits) and music preference with respect to sub-variables. The results of correlation all the sub-variables of BAS, including reward responsiveness ($r=.33$, $p<.001$), drive ($r=.28$, $p<.001$), and seeking fun ($r=.28$, $p<.001$), as well as BIS ($r=.33$, $p<.001$), were positively

related to total score of the MPQ. Fun-seeking behavior and BIS were positively related to all the sub-variables for music preference. Reward responsiveness was related to all sub-variables of the music preference except for the preference for classical music; drive was also related to all the sub-variables of MPQ except for the preference for pop music.

We conducted a multiple regression analysis to predict the participants' music preference with respect to each personality variable, Big Five personality factors, and the BAS/BIS (Table 4). Only openness ($\beta=.23$, $p<.001$) among the Big Five personality factors and reward responsiveness ($\beta=.17$, $p<.05$) in the BAS/BIS were significant determinants of music preference. In addition, the BAS/BIS accounted for approximately 15% of the variance in music preference, and the Big Five personality factors approximately 7%. This suggests that temperamental personality traits are

Table 4. Results of the Regression Analysis for Music Preference (N=347)

Predictors	B	β	t	F	R²
Emotional Stability	-.18	-.025	-.47		
Extraversion	.04	.007	.11		
Openness	1.35	.229	4.09***	5.07***	.069
Agreeableness	.18	.030	.47		
Conscientiousness	.04	.007	.11		
Reward Responsiveness	1.14	.170	2.50*		
Drive	1.09	.178	1.77	14.87***	.148
Fun-Seeking	.04	.005	.06		
Behavioral Inhibition	.91	.110	1.79		

* $p<.05$, *** $p<.001$.

more closely related to the music preference among college students than Big Five personality factors.

Discussion

Music has considerable influence on young individuals. Previous studies (e.g. LeBlanc, Sims, Siivola, & Obert, 1996) have shown that the influence of music on individuals' lives may be particularly strong for younger individuals than for older ones. The results of the present study verify the relationship between certain personality factors and the specific preference for music in the daily life of youths and suggest that the preference for music may include participating in musical activities as well as listening to music and that individual differences in these preferences may be significantly related to personality traits, particularly to dispositional personality factors.

The reliability and validity of the proposed music preference questionnaire (MPQ), which includes 35 items and 5 factors, are satisfactory, and that there may be substantial individual differences in listening to music as well as in other musical activities. Although it was assumed that the preference for emotional calmness or tension relief from music would be different from that for excitement from music, the results of the factor analysis indicate that they loaded on the same factor, suggesting that people prefer

only emotional calmness and that they are not like to prefer excitement. Most people are likely to simultaneously pursue emotional calmness and excitement, which has same implications for music therapists: music may be used for mood enhancement and emotional regulation by some individuals. This result also provides support for Chamorro-Premuzic and Furnham (2007) who classified music use into the emotional regulation, cognitive need, and background purpose categories and viewed using music for emotional regulation as one concept.

The female participants were more likely to engage in musical activities and prefer classical music their male counterparts. This gender difference in musical activities may be due to the gender-related stereotype formulated during early childhood. For example, Pickering and Repacholi (2002) found that children are attracted to same-sex musicians and the musical instruments those musicians use, which suggests that children's choice of musical activities may be motivated by their desire to avoid behaving like children of the opposite sex. Boys' (or males') resistance to some musical activities may influence the selection of their occupation (Jeffery & Durkin, 1989) and be related to gender-related social norms. For example, opportunities involving classical music and learning musical instruments are provided by parents in early childhood, particularly in Korea. This gender difference may be due to parents' stereotype with respect to gender and classical music

activities as well as their attitude toward gender roles in music, which may influence their children's preferences and attitudes with respect to musical activities and classic music.

Openness was most closely related to the participants' music preference, and among Big Five Personality traits, it was the only significant determinant of music preference. This result is consistent with the findings of Rentfrow and Gosling (2003), who suggested that openness is closely related to most genres of music preferred by college students. Costa and McCrae (1992) explained openness as a personality trait that involves active imagination, aesthetic sensitivity, attentiveness to inner feelings, and the preference for various activities. Highly open individuals are likely to show a high degree of flexibility with respect to new experiences, whereas those less open are more likely to be closed to new experiences and show a conventional and traditional outlook or behavior. The results suggest that highly open college students may prefer new styles of music and unfamiliar music activities, which may reinforce their objective to have fun or be artistic.

The emotional stability of college students was negatively related to the pursuit of psychological effects of music, suggesting that neurotic individuals are more likely to use music to change or enhance their negative emotions. This is consistent with the findings of previous studies (Chamorro-Premuzic & Furnham, 2007; Chamorro-Premuzic, Gomà-i-Freixanet, Furnham,

& Muro, 2009; Chamorro-Premuzic, Swami, Furnham, & Maakip, 2009; Juslin, 2000; Juslin & Laukka, 2003). Although extraversion has been found to be negatively related to the emotional use of music in some studies (Chamorro-Premuzic & Furnham, 2007), other studies (Chamorro-Premuzic, Gomà-i-Freixanet, Furnham, & Muro, 2009; Chamorro-Premuzic, Swami, Furnham, & Maakip, 2009) have found a positive relationship. Extroverts may use music for distraction purposes (Chamorro-Premuzic, Swami, Furnham, & Maakip, 2009).

The results of the present study indicate no relationship between extraversion and the pursuit of psychological effects of music, but extraversion was positively related to the preference for singing and pop music. Because music can occasionally assume a role as an emotional communication system in social groups (Grewé, Nagel, Kopiez, & Altenmüller, 2007), extraverted individuals use music for emotional communication with others as well as for increasing the arousal level. These results provide support for this assumption by identifying another relationship between the preference of singing and agreeableness, which is a tendency to be easily accommodating in social situations in concern for cooperation and social harmony.

Conscientiousness, which is a tendency to achieve goals with the use of self discipline, carefulness, thoroughness, organization, and deliberation, was positively related to the preference for musical activities and classical

music. Chamorro-Premuzic and Furnham (2007) emphasized that conscientiousness may be negatively related to creativity because conscientiousness is negatively correlated with the use of music for emotional regulation and explained that conscientious individuals may be more likely to experience music in rational ways because conscientiousness may be the opposite of the artistic and imaginative abilities (Costa & McCrae, 1992; Eysenck, 1993). However, the results of the present study do not provide support for this belief and suggest that being artistic and developing musical talents require individuals' conscientiousness.

As hypothesized, the BAS and the BIS, dispositional personality traits were more closely related to music preference among youths than the Big Five personality Factors; that is dispositional personality traits and motivation-based personality factors accounted for a larger portion of variance in music preference than the Big Five personality factors did. Because the Big Five personality traits also included dispositional personality traits such as emotional stability and extraversion, this relationship could not be explained only with dispositional personality traits. Little and Zuckerman (1986) suggested that individuals' involvement in musical activities is positively related to their sensation seeking efforts. In the present study, fun-seeking behavior was significantly correlated with all sub-variables for music preference, reward responsiveness, which refers to a positive reaction

with respect to the occurrence or anticipation of a reward, accounted for the largest portion of variance in music preference. Grewe and his colleagues (2007) suggested that emotional responses to music are more closely related to reward dependence than to sensation-seeking behavior. The BIS (the responsiveness to punishment which is stimulated signals of punishment, no rewards, and innate fear stimuli) was positively related to music preference among youths and to all its sub-variables, suggesting that music reduces negative emotions such as anxiety and fear and that it may provide motives to escape punishment and unpleasant experiences and provides support for music therapists who believe that music can promote positive emotions in individuals suffering from anxiety and depression.

The results verify the gender differences in music preference and identify some relationships between personality traits and music preference. Further, they suggest that dispositional and motivation-based personality factors are more closely related to music preference than personality characters. To understand and generalize the results of this study, we should note some limitations of this study. First, the participants were college students who were from only two schools in Seoul. Second, although we developed the MPQ because other questionnaires include only genres of music or reasons for using music, the MPQ has some limitations and weaknesses. Third, personality traits accounted

for only a small portion of music preference. This may be due to the reliability of the scale. For example, the Big Five Locator test, which was using to measure Big Five personality factors, is a compact and quick method, but its reliability, internal consistency, was relatively low. Further, there may be some variables, including environmental factor, that moderate the relationship between personality traits and music preference. Thus, future research should consider these aspects to provide a better understanding of personality and music preference. This study could not examine the relationship between the sub-variables for music preference and personality traits, and thus, future research should investigate such relationships.

Previous studies (Rentfrow & Gosling, 2003; Rentfrow & Gosling, 2006) have shown that people, particularly those who are younger, tend to believe that their preferences for music reveals more about their personality than their preference for any other things, including books, clothing, foods, television programs, and movies, which suggests that music may have considerable influence on the emotion, cognition, and behavior of youths. In addition, the BAS and the BIS (dispositional personality traits and motivation-based personality factors respectively) accounted for approximately 15% of the variance in music preference among young people, which suggests that music preference may be influenced by innate personality traits. Nevertheless, the role of ethnicity in music preference should be

considered in future research to further interpret the results of this study and provide a better understanding of personality related with music preference for musicians, music educators, and music psychologists.

References

- Aron, A. R., Robbins, T. W., & Poldrack, R. A. (2004). Inhibition and the right inferior frontal cortex. *Trends in Cognitive Sciences*, 8, 170-177.
- Carver, C. S., & White, T. L. (1994). Behavioral inhibition, behavioral activation, and affective responses to impending reward and punishment: The BIS/BAS scales. *Journal of Personality and Social Psychology*, 67, 319-333.
- Cattell, R. B., & Saunders D. R. (1954). Musical preferences and personality diagnosis: A factorization of one hundred and twenty themes. *Journal of Social Psychology*, 39, 3-24.
- Chamorro-Premuzic, T., & Furnham, A. (2007). Personality and music: Can traits explain how people use music in everyday life? *British Journal of Psychology*, 98, 175 - 185.
- Chamorro-Premuzic, T., Gomà-i-Freixanet, M., Furnham, A., & Muro, A. (2009). Personality, self-estimated intelligence, and uses of music: A Spanish replication and extension using structural equation modeling. *Psychology of Aesthetics, Creativity, and the Arts*, 3, 149-155.
- Chamorro-Premuzic, T., Swami, V., Furnham, A., & Maakip, I. (2009). The Big Five personality

- traits and uses of music: A replication in Malaysia using structural equation modeling. *Journal of Individual Differences*, 30, 20-27.
- Cloninger, C. R. (2000). Biology of personality dimensions. *Current Opinion in Psychiatry*, 13, 611-616.
- Costa, P. T. & McCrae, R. R. (1992). *NEO personality inventory professional manual*. Odessa, FL: Psychological Assessment Resources.
- Costa, P. T., & McCrae, R. R. (1980). Influence of extraversion and neuroticism on subjective well-being: Happy and unhappy people. *Journal of Personality and Social Psychology*, 38, 668-678.
- Delzell, J. K., & Leppla, D. A. (1992). Gender associations of musical instruments and preferences of fourth grade students from selected instruments. *Journal of Research in Music Education*, 40, 93-103.
- Eid, M., Riemann, R., Angleitner, A., & Borkenau, P. (2003). Sociability and positive emotionality: Genetic and environmental contributions to the covariation between different facets of extraversion. *Journal of Personality*, 71, 319-346.
- Elliot, A. J., & Thrash, T. M. (2002). Approach-avoidance motivation in personality: Approach and avoidance temperaments and goals. *Journal of Personality and Social Psychology*, 82, 804-818.
- Eysenck, H. J. (1967). *The biological basis of personality*. Springfield, IL: Charles Thomas.
- Eysenck, H. J. (1993). Creativity and personality: Suggestions for a theory. *Psychological Inquiry*, 4, 147 - 178.
- Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods*, 4, 272-299.
- Fowles, D. C. (1980). The three arousal model: Implications of Gray's two-factor learning theory for heart rate, electrodermal activity, and psychopathy. *Psychology*, 17, 87-104.
- Gabrielsson, A., & Lindstrom, S. (2003). Strong experiences to music: A descriptive system. *Musicae Scientiae*, 7, 157-217.
- Gray, J. A. (1990). Brain systems that mediate both emotion and cognition. *Cognition and Emotion*, 4, 269-288.
- Gray, J. A., & McNaughton, N. (2000). *The Neuropsychology of Anxiety*. London: Oxford University Press.
- Grewe, O., Nagel, F., Kopiez, R., & Altenmüller, E (2007) Listening to music as a re-creative process: Physiological, psychological, and psychoacoustical correlates of chills and strong emotions. *Music Perception*, 24, 297 - 314.
- Hargreaves, D. J., & North, A. C. (1997). *The social psychology of music*. New York: Oxford University Press.
- Hills, P., Argyle, M., & Reeves, R. (2000). Individual differences in leisure satisfactions: An investigation of four theories of leisure motivation. *Personality and Individual Differences*, 28, 763-779.
- Howard, P. J., Medina, P. L., & Howard, J. M. (1996). The big five locator: A quick assessment tool for consultants and trainers. In J. W. Pfeiffer (Ed.), *The 1996 Annual: Vol. 1*.

- Training*. San Diego, CA: Pfeiffer and Company.
- Jeffery, L., & Durkin, K. (1989). Children's reactions to televised counter-stereotyped male sex role behavior as a function of age, sex and perceived power. *Social Behaviour*, 4, 285-310.
- Juslin, P. N. (2000). Cue utilization in communication of emotion in music performance: Relating performance to perception. *Journal of Experimental Psychology*, 6, 1797 - 1813.
- Juslin, P. N., & Laukka, P. (2003). Communication of emotions in vocal expression and music performance: Different channels, same code? *Psychological Bulletin*, 129, 770 - 814.
- Lasky-Su, J. A., Faraone, S. V., Glatt, S. J., & Tsuang, M. T. (2005). Meta-Analysis of the association between two polymorphisms in the serotonin transporter gene and affective disorders. *American Journal of Medical Genetics*, 133, 110-115.
- LeBlanc, A., Sims, W. L., Siivola, C., & Obert, M. (1996). Music style preferences of different age listeners. *Journal of Research in Music Education*, 44, 49 - 59.
- Little, P., & Zuckerman, M. (1986). Sensation seeking and music preferences. *Personality and Individual Differences*, 7, 575 - 577.
- McCrae, R. R., & Costa, P. T. (1991). Adding Liebe und Arbeit: The full five factor model and well-being. *Personality and Social Psychology Bulletin*, 17, 227-232.
- North, A. C., Hargreaves, D. J., & McKendrick, J. (2000). The effects of music on atmosphere in a bank and a bar. *Journal of Applied Social Psychology*, 30, 1504 - 1522.
- North, A. C., Hargreaves, D. J., & O'Neill, S. A. (2000). The importance of music to adolescents. *British Journal of Educational Psychology*, 70, 255 - 272.
- Pickering, S., & Repacholi, B. (2002). Modifying children's gender-typed musical instrument preferences: The effects of gender and age. *Sex Roles*, 45, 623-643.
- Rentfrow, P. J., & Gosling, S. D. (2003). The Do Re Mi's of Everyday Life: The Structure and Personality Correlates of Music Preferences. *Journal of Personality and Social Psychology*, 84, 1236 - 1256.
- Rentfrow, P. J., & Gosling, S. D. (2006). Message in a ballad: The role of music preferences in interpersonal perception. *Psychological Science*, 17, 236 - 242.
- Schwarz K. D., Fout, G. T. (2003). Music preferences, personality style, and developmental issues of adolescents. *Journal of Youth and Adolescence*, 32, 205-213.
- Tekman, H. G., & Hortacsu, N. (2002). Music and social identity: Stylistic identification as a response to musical style. *International Journal of Psychology*, 37, 277 - 285.
- Wheeler, R. E., Davidson, R. J., & Tomarken, A. J. (1993). Frontal brain asymmetry and emotional reactivity: A biological substrate of affective style. *Psychophysiology*, 30, 82-89.

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음악선호와 성격의 관계

서 경 현

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본 연구에서는 음악선호에 개인차가 있다고 가정하고 성격과 음악선호의 관계를 검증하였다. 본 연구의 참여자는 347명(여: 185)의 대학생이었고, 연령 분포는 17세에서 37세($M=21.53$, $SD=2.26$)사이였다. 성격을 측정하기 위해 대오탐지척도(The Big Five Locator test)와 한국판 BAS/BIS 척도를 사용하였다. 연구자들이 개발한 35문항의 음악선호검사(MPQ) 참여자들이 음악선호를 측정하였으며, 이 척도는 만족할만한 신뢰도와 타당도를 보였다. 분석결과, 여성이 남성보다 음악활동을 더 많이 하고 있었으며 클래식음악을 더 좋아하고 있었다. 상관분석에서는 외향성, 개방성, 순응성이 음악선호, 즉 MPQ 전체 점수와 정적 상관을 보인 반면에, 정서적 안정성은 음악선호 하위변인인 음악의 심리적 효과 추구와는 부적 상관이 있었다. BIS 뿐만 아니라 포함하여 BAS의 모든 하위변인이 음악선호와 정적으로 상관이 있었다. BAS와 BIS는 음악선호의 변량을 15%, 5요인 성격특성은 7% 정도를 설명하고 있었다. 본 연구는 음악선호에 성차가 있다는 것과 음악선호와 상관이 있는 성격 요인이 있다는 것을 재확인하였고, 성격 요인 중에 기질적이고 동기중심 성격 요인이 음악선호와 더 밀접한 관계가 있다는 것을 보여주었다.

주요어 : 음악선호, 성격, 5요인 성격, BAS/BIS